March 22, 2019

Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Moisture-Resistant Requirements for Computer Keyboards

From over thirty years experience as a consumer of computer electronics, it occurred recently the need for a computer keyboard to be under regulation to resist a certain amount of environmental moisture. This pertains perhaps more to a laptop computer than a desktop computer.

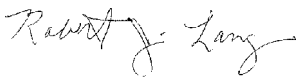
The reason is that some keyboards are quite resistant to moisture and water (stated as “water spill resistant” or “immersible”) while another may be quite prone to damage with only a small amount of exposure to moisture.

An example is the HP Stream Laptop, which went “haywire” (malfunctioned) when the keyboard was cleaned with a damp sponge, and could not recover. The instructions of the User Manual stated this method of cleaning the keyboard was approved, yet the keyboard was permanently damaged.

On the other hand, there are keyboards that are spec’d as “spill resistant” or even “immersible” to water.

Apparently, the HP Stream keyboard was mis-designed and most likely made of non-solid materials for this to happen. The manufacturer HP has accomplished the design of moisture-resistant keyboards from years ago, such that it must have simply missed this criteria for its new laptop. It missed the “checklist” for moisture-resistance because there was no checklist. There needs to be a rule such that each-and-every keyboard meets a minimum standard for moisture-resistance.

The question arises, what about the other components of a computer, don’t they need to be moisture-resistant as well ? The other components of a computer, especially a laptop, are considered “inherently” protected because they are sealed within the computer’s case. The keyboard, however, involves dynamically moving switches and will most likely never be completely sealed from the environment. Moreover, the keyboard is interfaced by the user – constantly touched by human hands – and will most likely be subject to periodic cleaning. Because of its uniqueness compared to other components, the keyboard needs to be made of solid materials (i.e., solid state).



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